

Inrush Current Limiters

B57238

Insulation Voltage 1000 VDC for 1 s, $\Delta R_N/R_N = \pm 15\%$

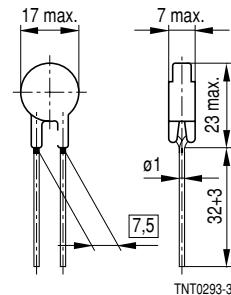
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Applications

- Switch-mode power supplies
- Soft-start motors, e.g. in vacuum cleaners

Features

- Close resistance tolerance, improved insulation voltage
- Useable in series connections up to 265 V_{rms}
- Coated thermistor disk
- Kinked leads of tinned copper wire
- Wide resistance range
- UL approval (E69802)



Dimensions in mm

Approx. weight 3 g

Delivery mode

Bulk (standard),
cardboard tape, reeled or in Ammo pack

Climatic category (IEC 60068-1)				55/170/56			
Max. power at 25 °C		P_{max}		3,9		W	
Resistance tolerance		$\Delta R_N/R_N$		$\pm 15\%$		°C	
Rated temperature		T_N		25			
B value tolerance		$\Delta B/B$		$\pm 3\%$			
Dissipation factor (in air)		δ_{th}		approx. 20		mW/K	
Thermal cooling time constant (in air)		τ_c		approx. 80		s	
Heat capacity		C_{th}		approx. 1600		mJ/K	
Test voltage ($t = 1$ s)		V_T		1000		VDC	

R_{25} Ω	I_{max} (0 ... 65 °C) A	No. of R/T char- acteristic	$B_{25/100}$ K	$C_T^{(1)}$ 230 V μF	$C_T^{(1)}$ 110 V μF	Parameters for $R(I)^{(1)}$		Ordering code
						k	n	
2,5	8,4	1202	2800	700	2800	0,98	- 1,36	B57238S0259L002
3,0	7,4	1203	2900	700	2800	1,04	- 1,36	B57238S0309L002
5,0	6,4	1207	2965	700	2800	1,23	- 1,37	B57238S0509L002

1) For details on the capacitance C_T as well as on the parameters k and n refer to "Application Notes", pages 40–42.

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Reliability data

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 60068-2-2	Storage at upper category temperature $T: 170\text{ }^{\circ}\text{C}$ $t: 1000\text{ h}$	< 10 %	No visible damage
Storage in damp heat, steady state	IEC 60068-2-3	Temperature of air: 40 $^{\circ}\text{C}$ Relative humidity of air: 93 % Duration: 21 days	< 5 %	No visible damage
Rapid temperature cycling	IEC 60068-2-14	Lower test temperature: -55 $^{\circ}\text{C}$ Upper test temperature: 170 $^{\circ}\text{C}$ Number of cycles: 10	< 10 %	No visible damage
Endurance		$I = I_{\max}$ $t: 1000\text{ h}$	< 10 %	No visible damage
Cyclic endurance		$I = I_{\max}$, 1000 cycles On-time = 1 min Cooling time = 6 min	< 10 %	No visible damage
Transient load		Capacitance = C_T Number of cycles: 1000	< 5 %	No visible damage

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